



PIT si1.2

Control and signal devices



piltz

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SD means Secure Digital

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Introduction

Validity of documentation

This documentation is valid for the product PIT si1.2. It is valid until new documentation is published.

This operating manual explains the function and operation, describes the installation and provides guidelines on how to connect the product.

Using the documentation

This document is intended for instruction. Only install and commission the product if you have read and understood this document. The document should be retained for future reference.

Definition of symbols

Information that is particularly important is identified as follows:



DANGER!

This warning must be heeded! It warns of a hazardous situation that poses an immediate threat of serious injury and death and indicates preventive measures that can be taken.



WARNING!

This warning must be heeded! It warns of a hazardous situation that could lead to serious injury and death and indicates preventive measures that can be taken.



CAUTION!

This refers to a hazard that can lead to a less serious or minor injury plus material damage, and also provides information on preventive measures that can be taken.



NOTICE

This describes a situation in which the product or devices could be damaged and also provides information on preventive measures that can be taken. It also highlights areas within the text that are of particular importance.

**INFORMATION**

This gives advice on applications and provides information on special features.

Safety

Intended use

The muting lamp is intended for use as an indicator in muting mode. If the function of the lamp is monitored by an evaluation device that meets PL e (Cat. 4) of EN ISO 13849-1 and the necessary circuit measures are taken into account, the muting lamp can also be used up to PL e (Cat. 4). Permissible evaluation devices are:

- ▶ The modular safety system PNOZmulti (for application example see technical catalogue PNOZmulti)
- ▶ Programmable safety systems in the PSS range
- ▶ Programmable safety systems in the PSS range with SafetyBUS p connection

The following is deemed improper use in particular:

- ▶ Any component, technical or electrical modification to the product
- ▶ Use of the product outside the areas described in this manual
- ▶ Use of the product outside the technical details (see chapter entitled "Technical Details").

Safety regulations

Use of qualified personnel

The products may only be assembled, installed, programmed, commissioned, operated, maintained and decommissioned by competent persons.

A competent person is someone who, because of their training, experience and current professional activity, has the specialist knowledge required to test, assess and operate the work equipment, devices, systems, plant and machinery in accordance with the general standards and guidelines for safety technology.

It is the company's responsibility only to employ personnel who:

- ▶ Are familiar with the basic regulations concerning health and safety / accident prevention
- ▶ Have read and understood the information provided in this description under "Safety"
- ▶ And have a good knowledge of the generic and specialist standards applicable to the specific application.

Warranty and liability

All claims to warranty and liability will be rendered invalid if

- ▶ The product was used contrary to the purpose for which it is intended
- ▶ Damage can be attributed to not having followed the guidelines in the manual
- ▶ Operating personnel are not suitably qualified
- ▶ Any type of modification has been made (e.g. exchanging components on the PCB boards, soldering work etc.).

Disposal

- ▶ When decommissioning, please comply with local regulations regarding the disposal of electronic devices (e.g. Electrical and Electronic Equipment Act).

Unit features

- ▶ Muting lamp in accordance with EN 61496
- ▶ 2 semiconductor outputs for function monitoring
- ▶ Scope of supply:
 - Muting lamp including bulb
 - Mounting bracket
 - 2 screws

Function description

In muting mode, the operator must be made aware of the hazard that results from the suspension of the safety function. The muting lamp is designed for this purpose. It illuminates as soon as muting mode is started.

Two semiconductor outputs enable the function of the lamp to be monitored.

- ▶ Normal mode:

If the lamp is not operated, both outputs are low. If the lamp is operated and illuminated (muting mode active), both outputs are high.
- ▶ Error during operation

If an error occurs or the lamp is faulty, at least one of the two output signals changes to low.

Recommendation: To increase the availability of the plant, you can use a second muting lamp. If one of the muting lamps fails (e. g. faulty bulb), the second muting lamp takes over its function.

Installation and wiring

The cover must be taken off and the bulb removed for installation and wiring:

- ▶ Turn the cover to the right and pull it off upwards.
- ▶ While applying slight downward pressure, rotate the bulb by approx. 90° to the right and pull it out.

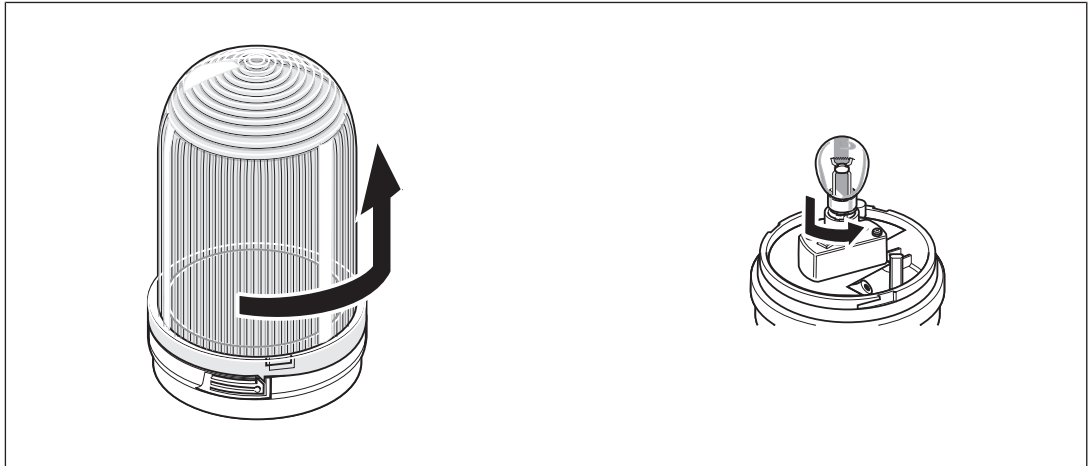


Fig.: Take off the cover and remove the bulb

Wiring



CAUTION!

Wire the lamp when it is isolated from the power supply.

- ▶ Perforate the stuffing box using a screwdriver.
- ▶ Connect the supply voltage and the input signal that signals muting mode to the 3-pole terminal.
- ▶ Depending on the category required, connect one or both semiconductor outputs to an evaluation device.

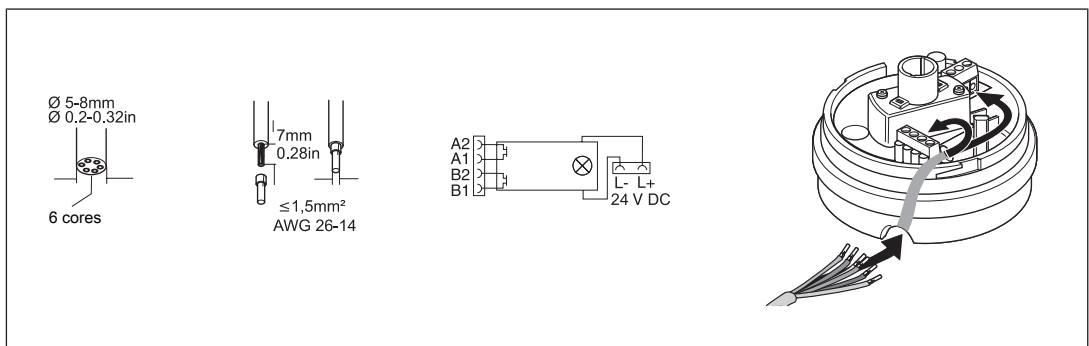


Fig.: Wiring

Installation



CAUTION!

The muting lamp must be mounted upright.

- ▶ Install the base directly on a horizontal surface or on the fastening bracket using the two screws supplied.
- ▶ Install the fastening bracket with the base on a vertical surface.

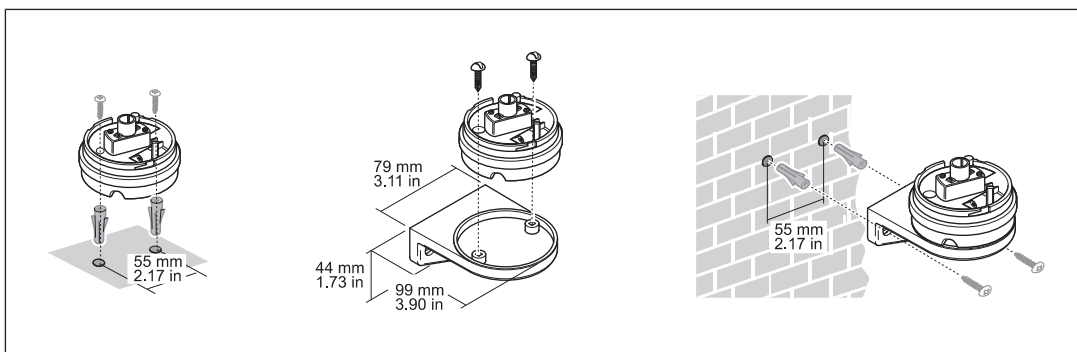


Fig.: Installation

- ▶ Refit the bulb and the cover. To ensure that no dirt enters the housing, the cover must be securely locked to the base. Rotate the cover to the left until the lug on the cover engages behind the lug on the base.

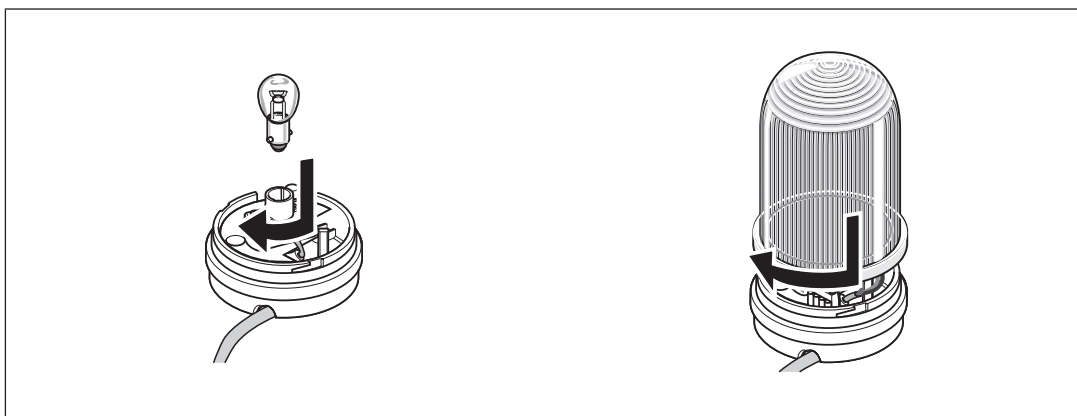


Fig.: Fit the bulb and lock the cover

If it is necessary to open the cover again, e.g. to replace the bulb, press down the strip underneath the lug using a screwdriver. In this way the cover is unlocked and can be opened by rotating.

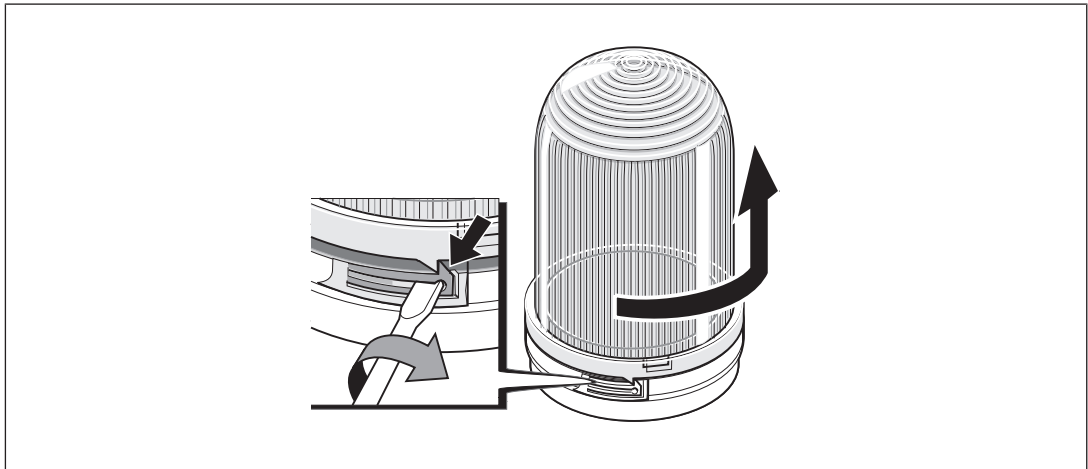


Fig.: Re-open cover

Connection examples

Driven via PNOZmulti

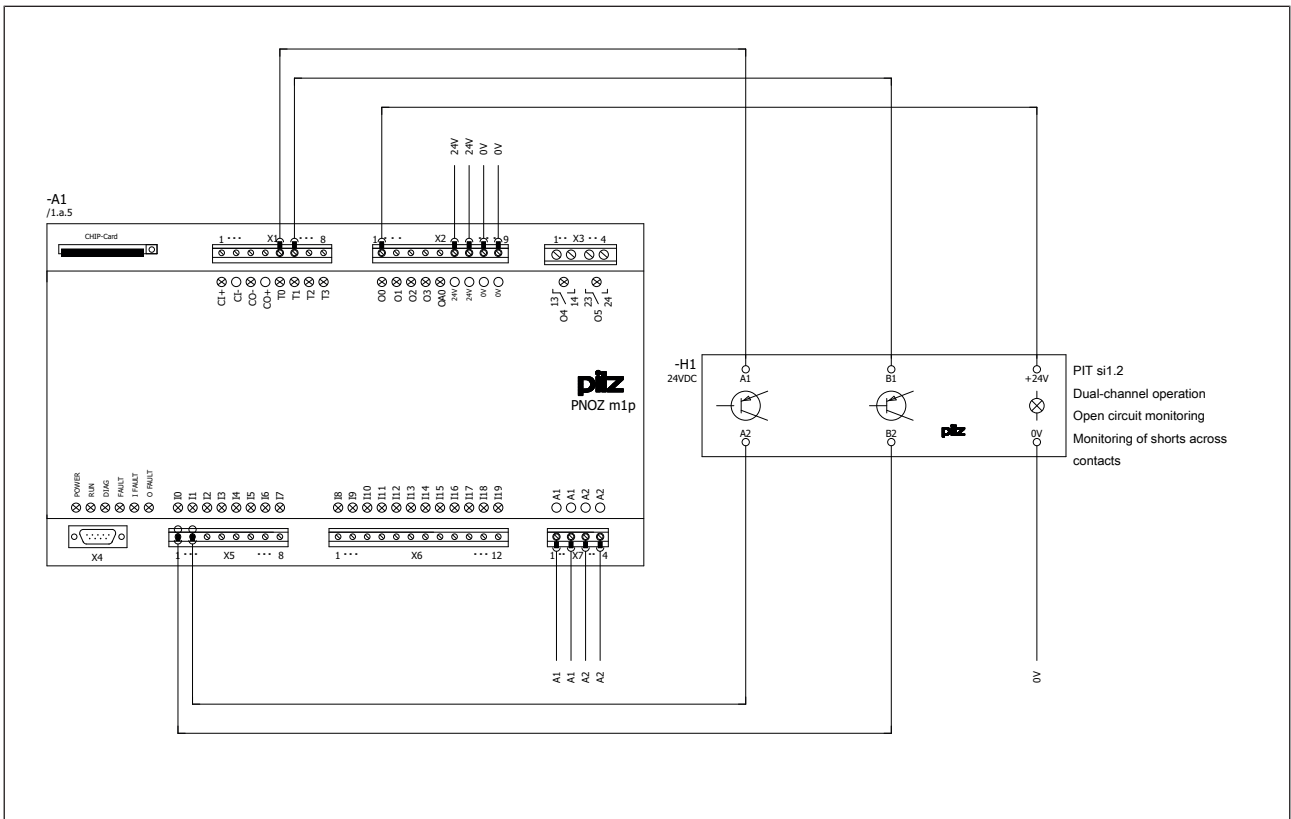


Fig.: Driven via PNOZ m1p

Driven via PSSuniversal

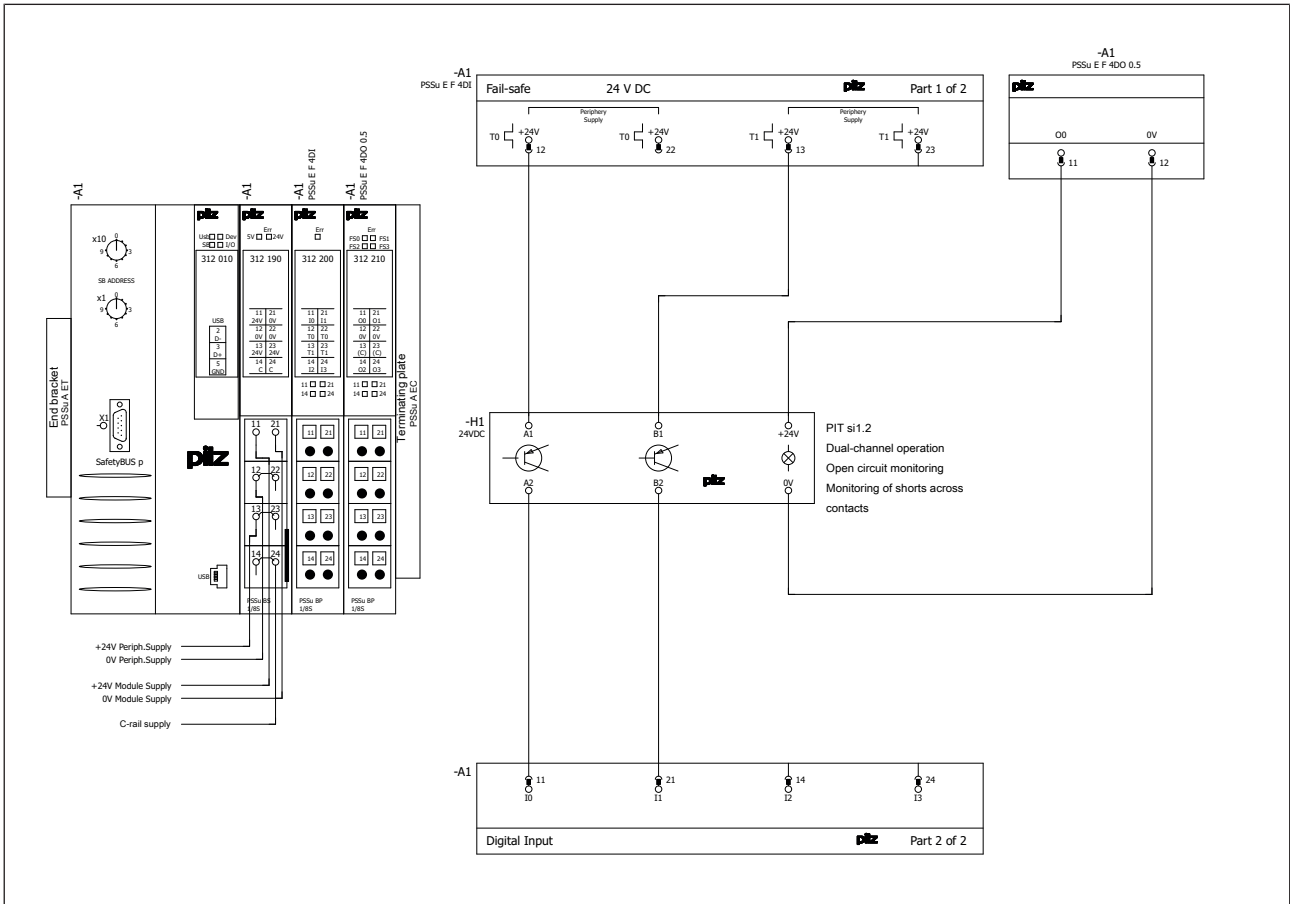


Fig.: Driven via PSSu H SB with PSSu E F PS, PSSu E F 4DI and PSSu E F 4DO 0.5

Dimensions

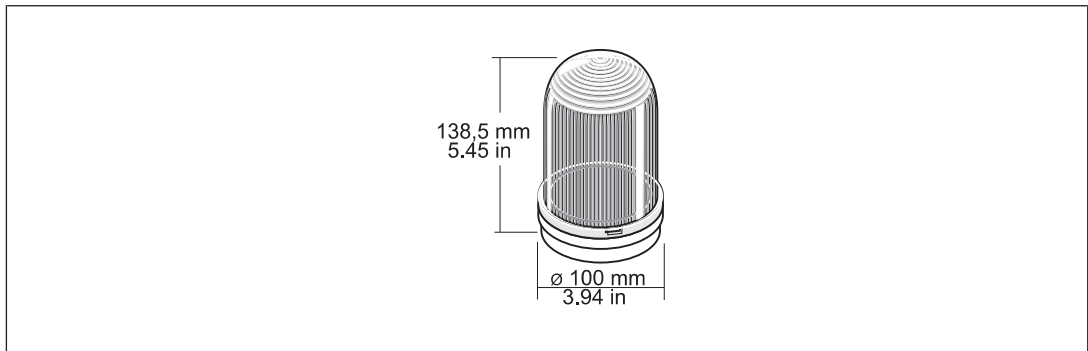


Fig.: Dimensions

Technical details

General	
Approvals	CE, TÜV, cULus Listed
Self-monitored	Yes
Lamp	
Kind	bulb
Type	BA15d, 24 V DC, 7W
Electrical life	1,000 hours
Electrical data	
Supply voltage	
Voltage	24,0 V
Kind	DC
Voltage tolerance	-15 %/+15 %
Output of external power supply (DC)	7,0 W
Residual ripple DC	5 %
Continuous duty	100 %
Semiconductor outputs	
Number	2
Current	100 mA
Short circuit-proof	Yes
Relay outputs	
Contact fuse protection external, safety contacts	
Blow-out fuse, quick	0,5 A
Times	
Reaction time	
In operation and with broken bulb filament	1 - 5 ms
When fuse is triggered and with short circuit current ≥ 4 A	< 300 ms
Environmental data	
Ambient temperature	
Temperature range	0 - 50 °C
Storage temperature	
Temperature range	-25 - 50 °C
EMC	EN 61000-6-2
Protection type	
Housing	IP65
Mechanical data	
Cable diameter	5 - 8 mm
Cable gland	ISO 20 mm
Mounting position	Vertical
Material	
Cover	PC
Bottom	ABS
Torque setting with screw terminals	0,50 - 0,60 Nm
Connection type	Screw terminal

Mechanical data

Dimensions

Height **138,5 mm**

Diameter of pushbutton **100,0 mm**

Weight **218 g**

Where standards are undated, the 2013-04 latest editions shall apply.

Order reference

Product type	Features	Order no.
PIT si1.2 muting lamp self monitoring	Signal lamp for muting mode with self monitoring	620 020

EC declaration of conformity

This product/these products meet the requirements of the directive 2004/108/EC for machinery of the European Parliament and of the Council. The complete EC Declaration of Conformity is available on the Internet at www.pilh.com/downloads.

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► Support

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Energy saving by Pilz



The 4-fold safety of automation

COMPONENTS
SYSTEMS
SERVICES

Technical Ecological
Personal Economical



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